

# Interim Report of the Laws and Regulations Committee

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Reference  
Key Number

## 200 Introduction

The Laws and Regulations Committee (Committee) addressed the following items at its 2000 Interim Meeting. Table A identifies agenda items by Reference Key Number, title, and page number. The first three digits of the Reference Key Numbers of the items are assigned from the subject series listed below. The fact that an item may appear on the agenda does not mean it will be presented to the NCWM for a vote. The Committee may withdraw some items, present some items for information and further study, issue interpretations, or make specific recommendations for changes to the publications listed below. The recommendations presented in this agenda are statements of proposal and not necessarily recommendations of the Committee.

This agenda contains recommendations to amend National Institute of Standards and Technology (NIST) Handbook 130, 2000 edition, "Uniform Laws and Regulations," and NIST Handbook 133, "Checking the Net Contents of Packaged Goods," Third Edition and Supplements 1 (1990), 2 (1991), 3 (1992), 4 (1994), and other amendments adopted in 1998 and 1999 that have not been published. Revisions proposed by Committee members are shown in **bold face print** by ~~crossing out~~ information to be deleted and underlining information to be added. New items proposed for the handbooks are designated as such and shown in **bold face print**. Proposals presented for information are shown in *italic* type unless identified as informational. "SI" means the International System of Units. "FPLA" means the Federal Fair Packaging and Labeling Act. The section mark, "§," is used in most references in the text and is followed by the section number and title, (for example, § 1.2. Weight.) When used in this report, the term "weight" means "mass."

## Subject Series

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Weights and Measures Law (WML)	221 Series
Weighmaster Law (WL)	222 Series
Engine Fuels, Petroleum Products, and Automotive Lubricants Inspection Law (EFL)	223 Series
Uniform Regulations	230 Series
Packaging and Labeling Regulation (PLR)	231 Series
Method of Sale of Commodities Regulation (MSCR)	232 Series
Unit Pricing Regulation (UPR)	233 Series
Voluntary Registration of Servicepersons and Service Agencies for Commercial Weighing and Measuring Devices Regulation (VREG)	234 Series
Open Dating Regulation (ODR)	235 Series
National Type Evaluation Regulation (NTER)	236 Series
Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation (EFR)	237 Series
Interpretations and Guidelines	238 Series
Price Verification	239 Series
NIST Handbook 133	250 Series
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(In Order by Reference Key Number)**

**221                      Weights and Measures Law**

**221-1              W              Retail Price Posting**

**Status:** This item is being developed by the Central Weights and Measures Association. The Committee will accept comments on this issue at the Interim Meeting in 2000. For further information, contact Don Onwiler, Nebraska Department of Agriculture/Division of Weights and Measures, telephone: 402-471-4292, or at [donlo@agr.state.ne.us](mailto:donlo@agr.state.ne.us) via email.

**Source:** The Central Weights and Measures Association (CWMA).

**Background:** The Uniform Weights and Measures Law (UWML) does not require retailers to display the selling price of products for consumers. As a result, jurisdictions do not have a standard to guide them if they choose to amend their laws to require price information. When price posting is not required, consumers find making value comparisons difficult. The CWMA would like to develop a standard to guide jurisdictions that want to adopt retail price posting laws.

Proposal 1: The CWMA recommends amending the WML to include a price-posting requirement:

**Section XX. Price Posting**

**Whenever a commodity is being sold for a non-negotiable price, the price shall be clearly and conspicuously posted or displayed by the retailer prior to the sale of the commodity. If a commodity is being sold at a discounted price, ~~the exact amount of the discount,~~ or the discounted price shall be clearly and conspicuously posted or displayed by the retailer prior to the sale of the commodity.**

Proposal 2: The Southern and Western Weights and Measures Associations support the following amendments to further develop this item:

**Section XX. Price Posting**

**Whenever a commodity is being sold ~~for a non-negotiable price,~~ the price shall be clearly and conspicuously posted or displayed by the retailer prior to the sale of the commodity. If a commodity is being sold at a discounted price, ~~the exact amount of the discount,~~ or the discounted price shall be clearly and conspicuously posted or displayed by the retailer prior to the sale of the commodity. NIST Handbook 44, Section 3-30 as it applies to contract sales of petroleum motor fuel is exempt from this section.**

The Food Marketing Institute (FMI) and other retail trade associations do not support the adoption of price posting requirements. The FMI is concerned that the proposed wording could be interpreted to require retailers to post the regular price, the monetary value of the discount, and the sale price on all discounted items. If this is the intent of the requirement, according to FMI, retailers will have a costly burden, and consumers will have limited benefits. The Committee believes the intent of the proposal is to have retailers post only the price at which an item is offered for sale. If this is correct, the requirement could be met with either a shelf tag, sign, or by individually priced items.

The Committee requested that the CWMA work with representatives of the retail industry to develop this item. The Committee suggested that the CWMA establish an informal work group to develop the proposal and recommend good pricing practices for specific price accuracy issues related to percent off items (e.g., 70 percent off all items on a shelf or rack in a department store). The Committee also requested that the work group recommend how retailers can provide more precise information on package labels and signs regarding discounts offered to frequent shopper club card holders.

**Regional Action:** The Southern Weights and Measures Association (SWMA) supports further developing of this item. To ensure that the proposal receives comments from as many interested parties as possible, the SWMA recommends that

trade associations and other interested parties be informed about the issue. The SWMA is concerned about the impact the proposal will have on the many businesses that post a “non-negotiable” price. The SWMA recommends that the group define the term “non-negotiable.” Marketplace history indicates that the “non-negotiable” price may, in fact, be negotiable depending on factors such as the number of items a consumer buys, or the motivations of the seller.

This item was discussed in some detail at the Northeast Weights and Measures Association (NEWMA) meeting. The NEWMA report encouraged the Committee to make sure that the requirement is consistent with the price verification procedures and does not conflict with any of Handbook 44 requirements. NEWMA officials were most concerned that there might not be uniformity in adoption of this item since not all jurisdictions adopt every Handbook 130 requirement. Another question raised was if the requirement would apply prior to sale or during the time the item was on sale?

**Interim Meeting Action:** The Committee voted to withdraw this item. This Committee felt that the item was not fully developed at the Regional level.

## **221-2                    V            Reference to NCWM Adoption of NIST Handbooks**

**Source:** Central Weights and Measures Association

**Background:** Currently twenty-seven States automatically adopt NIST Handbook 133 by reference. For NIST Handbooks 44 and 130, the UWML refers to editions of those handbooks that the NCWM has adopted. In the case of NIST Handbook 133, however, paragraph (m) of Section 12 of the model law does not include the reference to NCWM adoption for Handbook 133. If the model law does not require the handbook to be adopted by the NCWM, the most current edition published becomes State law, whether it has been adopted by the NCWM or not. The proposed amendment resolves this omission and clearly specifies that the appropriate version of the handbook is the edition adopted by the NCWM.

**Recommendation:** Amend Section 12 of the Uniform Weights and Measures Law as follows:

**Section 12. Powers and Duties of the Director (m) weigh, measure, or inspect packaged commodities kept, offered, or exposed for sale, sold, or in the process of delivery, to determine whether they contain the amounts represented and whether they are kept, offered, or exposed for sale in accordance with this Act or regulations promulgated pursuant thereto. In carrying out the provisions of this section, the director shall employ recognized sampling procedures, such as are adopted by the National Conference on Weights and Measures and are designated published in National Institute of Standards and Technology Handbook 133, “Checking the Net Contents of Packaged Goods.”**

**Interim Meeting Action:** The Committee voted to make this a Voting item after verifying that the National Conference on Weights and Measures was the correct title when referring to the NCWM, instead of National Conference on Weights and Measures Inc. No further comments were received.

## **221-3                    W            Bonus Offers on Package Labels**

**Source:** Southern Weights and Measures Association (SWMA)

**Background:** According to the SWMA report Section 15. Misrepresentation of Quantity must be amended to mandate that retailers clarify terms found in flyers, mailers, signs, packages, etc. stating language such as "10% More", "18% Larger", "25% Free", "Save 50%", etc. One of the basic precepts of weights and measures is that the price, or quantity, of a package may not be presented in any manner calculated or tending to mislead, or in any way deceive a person. Another principal is to ensure that consumers have accurate information that will allow them to make informed decisions as to the cost and value of a packaged commodity.

According to the SWMA report this precept is being violated daily across the United States by countless packers, manufactures, and retailers. Weights and measures officials have turned a blind eye and allowed this to escalate into an accepted practice. Advertising in the form of labels attached to packages, flyers and mailers, and signs proliferate the marketplace proclaiming "10% MORE", "18% LARGER", "25% FREE", "SAVE 50% ". There can be no other possible

interpretations of these statements, they are obvious qualifications of the package contents and tend to exaggerate the amount, or value, of the package. In many instances the basis for these exaggerations is so vague the consumer has no possible way of understanding the actual amount, cost, or value of a particular commodity. The consumer is not given any basis for the declaration such as "more than what", "a savings based upon what price", or in the case of "FREE" product, just how much product is free. According to the SWMA report this problem is so widespread and all inclusive that there is no way it can be corrected by a single jurisdiction, state, or regional association, it must be addressed by the National Conference on Weights and Measures as a united organization on behalf of the American consumer. According to the SWMA report this amendment is needed to ensure that all packers, labelers, etc. are conforming to the same advertising and labeling guidelines and to assist consumers in making wise choices.

**Interim Meeting Action:** The Committee voted to withdraw this item after learning that the FTC has guidelines addressing deceptive pricing. The FTC guide is located in the Code of Federal Regulations Part 16.

## **231 Packaging and Labeling Regulation**

### **231-1 D Permit Multiple Unit or Total Prices to Appear on a Package Label**

**Source:** Southern Weights and Measures Association (SWMA)

**Background:** According to the SWMA, retailers are making widespread use of "Bonus Cards", "VIP Cards", etc., and placing a wide range of multiple unit and total prices on labels. This approach confuses consumers about what price they are paying. Currently, Section 20. Declaration of Unit Price on Random Weight Packages, of the Uniform Weights and Measures Law states "In addition to the declarations required by Section 19 of this Act, any package being one of a lot containing random weights of the same commodity, at the time it is offered or exposed for sale at retail, shall bear on the outside of the package, a plain and conspicuous declaration of the price per kilogram or pound and the total selling price of the package."

The SWMA recommends that the Committee work with Food Marketing Institute (FMI) and other retail trade associations, scale manufacturers, and other interested parties to develop a standard that would allow up to two (2) unit prices and total prices on random weight packages.

**Interim Meeting Action:** The Committee voted to maintain this item as Developmental. The Southern Association will work with Gale Prince of the Kroger Company to develop this item further.

### **231-2 W Principal Display Panel – Regulatory Interpretation**

**Source:** Nebraska Division of Weights and Measures

**Background:** This item was brought to the NCWM Interim Meeting for consideration to be added to the Committee agenda as an emergency item due to legislative action pending in Nebraska that may be in conflict with the Fair Packaging and Labeling Act and 21 CFR 101. This item generated much interest and concern from conference members in attendance at the interim meeting, not only on the proposal, but also regarding the use of emergency procedures to bring it forward.

When an inspector is determining compliance with requirements of the Handbook 130 Packaging and Labeling Regulation, he must identify which portion, or portions, of the package the manufacturer has designated as the principal display panel. In the case of packages manufactured at a location other than the retail outlet, it is that part, or those parts, of a label that is, or are, so designed as to most likely be displayed, presented, shown, or examined under normal and customary conditions of display and purchase. The issue arises when the retailer is also the manufacturer, such as the case with meat, cheese, deli, and bakery items.

In 1970, the NCWM adopted an interpretation of the definition of the Principal Display Panel (**2.7 Principal Display Panel or Panels**) to aide the inspector and manufacture in determining which panel has been designated by the manufacturer as the Principal Display Panel. That interpretation is consistent with the FDA 7560 interpretation found in NBS Handbook 108 Weights and Measures Labeling Handbook, which reads:

“It is important to note, however, that the presence of either a statement of identity or a statement of contents declaration alone on a label panel does not necessarily qualify the surface as a principal display panel. The criterion to be used is whether the manufacturer, either by design or through trade practice, customarily designates a specific package surface, or surfaces, for display of the product at retail.”

A recent interpretation of **§2.7 Principal Display Panel or Panels**, was provided to Nebraska Legislature which is in direct contradiction to the above. This caused a situation where weights and measures officials are unsure how to determine which portion of the package is the Principle display panel. The method used for the past 30 years is now in question. This item was offered by Nebraska as a reaffirmation of the original FDA interpretation, as adopted by the NCWM in 1970, in the absence of a later interpretation to supersede it.

**Interim Meeting Action:** Based on testimony from industry and some state officials about the timing of the issue and concerns over due process, and because Nebraska received an FDA interpretation which they believe would provide support to Nebraska Weights and Measures regarding immediate state legislation, the Committee voted to withdraw the item with the support of Nebraska. The Committee recognizes the importance of this item and intends to hear it in the future after it has been submitted through regional associations.

*(Editorial Note: Following the January NCWM Interim Meeting, additional information was received from FDA concerning § 2.7 Principle Display Panel or Panels. To assist weights and measures officials and industry in their interpretation and implementation of § 2.7, NIST will provide further clarification to the FDA and FTC regulations with supporting documentation in a NIST technical memo. For information on how to obtain a copy of this technical memo, please contact NIST by phone at 301-975-4868 or via the Internet at [www.nist.gov/owm](http://www.nist.gov/owm).)*

## **232 Method of Sale of Commodities Regulation**

### **232-1 V Construction and Industrial Plywood**

**Source:** Laws and Regulations Committee

**Discussion:** The U.S. Department of Commerce-sponsored group accountable for Voluntary Product Standard (VPS) PS I-95 requested the Committee to amend NIST Handbook 133 to recognize the accuracy provisions and tolerances of the VPS for plywood. A jurisdiction responding to a consumer complaint about the thickness of plywood sheeting conducted a survey in several retail outlets and found that the label claims of several manufacturers were incorrect. The jurisdiction notified the manufacturers of the survey results and advised them of the weights and measures legal requirements. In response to this notification, the manufacturers advised the jurisdiction that they manufacture plywood sheeting to meet NIST Voluntary Product Standard (VPS) PS 1-95 “Construction and Industrial Plywood.” This standard includes requirements for dimensions and tolerances, moisture content, and grade marking. The manufacturers involved have been advised that plywood sheeting must be accurately labeled and that thickness measurements must meet the lot average and individual unit requirements of NIST Handbook 133. The manufacturers were notified that the thickness and dimension tolerances specified in the VPS are not consistent with the maximum allowable variations specified in NIST Handbook 133 and that a VPS does not pre-empt State or local requirements. At the 1998 Interim Meeting, representatives of the plywood and hardwood industries presented information on their industry’s current measurement and labeling practices. The Industry representatives requested that the Committee defer action on this item until the various lumber industry trade associations have time to develop a consensus proposal for the NCWM to consider. The Committee agreed to withdraw this issue and provide technical assistance as industry develops their proposal. Following the 1998 Interim Meeting, the American Plywood Association (APA) requested that the L&R Committee consider the proposed addition to Handbook 130. According to the APA, its proposal would recognize the methods of sale that have been accepted in the marketplace since the 1940s. The proposal is based on the NIST Voluntary Product Standards that have been developed in a consensus process with input from producers, users, and general interest parties. The proposal, modeled after the precedent established for lumber, calls for full disclosure. The APA is prepared to provide information to the retail trade to assist in ensuring that the consumer is fully informed. Wood structural panels are a commodity, which have been successfully traded since the 1930s. According to the APA actual dimensions have rarely been an issue of commerce. The structural performance of the product and adequate performance under building law have always been the industries primary focus. Dimensional tolerances specified in the Product Standards are not consistent with NIST Handbook 133, yet they have served commerce well as evidenced by the rare instance of dimensional dispute. According to the APA, the primary issues that arise between buyer and seller relate to the quality of the glue bond, grade, workmanship, and occasionally other performance characteristics rather than dimensions.

**Regional Action:** The SWMA recognizes that NIST Handbook 130, Method of Sale Regulation provides for the sale of softwood and hardwood lumber based on nominal dimensions. Therefore, the SWMA recommended that the NCWM L&R Committee work with the APA and the Engineered Wood Association to develop language that is consistent with the existing methods of sale for softwood and hardwood lumber to address the dimensional requirements for structural wood panels. The Western Weights and Measures Association does not support the APA proposal. It submitted an alternative proposal to amend the Maximum Allowable Variations for manufactured wood panel (see Item 250-5). The Northeastern Weights and Measures Association (NEWMA) recommended that the Committee expand this issue to include an investigation of the marking and labeling practices of the entire manufactured wood industry. NEWMA also suggested that the best alternative was to permit the use of nominal sizes but require full disclosure of actual dimensions.

**Committee Recommendation:** Officials and industry representatives provided the Committee with a great deal of input on this issue. Most of the parties involved agreed that the best approach would be to permit the use of nominal sizes but also require full disclosure of actual dimensions. The Committee believes that consumers will be fully informed if both the nominal and actual dimensions are clearly displayed at the point of sale or wherever nominal sizes are displayed in retail stores (i.e. on shelf labels adjacent to the product where it is displayed or on the wood products themselves.) At the Interim Meeting, wood industry representatives agreed to provide information to the retail trade to assist them in the labeling of these products. The Committee recommends adopting a new Section 2.29, "Wood and Cellulose Based Panels" that is presented below.

## **2.29. Wood and Cellulose Based Panels**

**Applies to wood or cellulose-based panels used for construction, industrial and do-it-yourself projects. Such panels include, but are not limited to:**

- a. **Plywood**
- b. **Oriented Strand Board (OSB) and waferboard**
- c. **Hardboard**
- d. **Particleboard**
- e. **Medium Density Fiberboard (MDF)**
- f. **Cellulosic Fiberboard**
- g. **Wood Fiber Cement**

### **2.29.1 Quantity**

**Representations shall be in terms of the length, width, and thickness. The use of nominal or specified dimensions may be used if the actual dimensions are prominently displayed at the point of sale to the customer and the term nominal ("nom") or specified is also used in conjunction with any representation of nominal or specified dimensions.**

#### **Action at the 1999 Regional Meetings:**

The Southern and Central Weights and Measures Associations support the Committee's proposal to permit the use of nominal sizes if actual sizes are also displayed to consumers. The Northeast Weights and Measures Association (NEWMA) continues to support the Committee's original recommendation. According to the NEWMA report there was some discussion that the split vote was due to the emotional appeal of some of the arguments that were expressed on the floor. The NEWMA believes that "to advertise these items in other than nominal sizes is simply unworkable." Actual dimensions provided at the point of sale will provide consumers with specific needs with the necessary information to make valid comparisons. This applies equally to sub-cuts of the standard 4 x 8 sheet.

The Western Weights and Measures Association opposes the Committee's proposal and submitted an amended method of sale that is shown below.

**Western Weights and Measures Association Recommendation:** Adopt a new method of sale for wood and cellulose based panels to require the use of actual size designations as presented below.

## **2.29. Wood and Cellulose Based Panels**

**Applies to wood or cellulose-based panels used for construction, industrial and do-it-yourself projects. Such panels include, but are not limited to:**

- a. Plywood**
- b. Oriented Strand Board (OSB) and wafer board**
- c. Hardboard**
- d. Particle board**
- e. Medium Density Fiberboard (MDF)**
- f. Cellulosic Fiberboard**
- g. Wood Fiber Cement**

### **2.29.1. Quantity**

**~~Representations shall be in terms of the length, width, and thickness. The use of nominal or specified dimensions may be used if the actual dimensions are prominently displayed at the point of sale to the customer and the term nominal (“nom”) or specified is also used in conjunction with any representation of nominal or specified dimensions. of the product must be clearly and prominently displayed on any retail display or advertisement.~~**

**Interim Meeting Action:** The Committee voted to move the original proposal forward as a Voting item and withdraw the proposal submitted by the Western Weights and Measures Association.

## **232-2 V Sand, Rock, Gravel, Stone, Paving Stone, and Similar Materials**

**Status:** The Western Weights and Measures Association is developing this item. For further information, contact John Moore, Arizona Weights and Measures Department, Telephone: 602-255-5211, or by Fax on 602-255-1950.

**Source:** The Western Weights and Measures Association (WWMA)

**Background:** According to the WWMA, these commodities are sold by cubic measure, dimensions, weight, and area. Methods of sale that are not uniform for the same product at all retail locations will frustrate value comparison. The intent is to develop a method of sale for each commodity to ensure consumers can compare values. The Northeast Weights and Measures Association supports the development of this issue.

**Regional Action:** The WWMA submitted the following method of sale for consideration:

### **2.2X. Sand, Rock, Gravel, Stone, Paving Stone, and Similar Materials**

**2.2X.X. Method of Retail Sale - - All sand, rock, gravel, stone, paving stone, and similar materials kept, offered, or exposed for sale must be sold as follows.**

- a. Top-soil, fill dirt, aggregate or chipped rock, sand (including concrete and mortar sand), decomposed granite, landscape type rock, and cinders must be sold by the cubic meter or cubic yard or by weight.**
- b. Flagstone must be sold by weight.**
- c. Dimensional cut stone must be sold by square meter, square foot, or weight.**
- d. This requirement does not apply to single stones with engraving such as grave-stones, natural or manmade artwork, and landscape boulders are exempt.**

**Interim Meeting Action:** The Committee received no comments. The Committee voted to change the designation to Voting.



## 232-3      **D      Stored Tare Weights**

**Source:** Southern Weights and Measures Association (SWMA)

**Background:** According to the SWMA report, vehicle tare weights are being used for lengthy time periods and have often been found incorrect. The errors found in initial surveys range from a truck weighing 8900 pounds less than the stored tare to trucks that weighed 2680 pounds more than the stored tare. A load of sand or gravel at a cost of \$5.50 per ton with an error of 750 lbs has a monetary value for each weighing error of \$2.06. If this error is multiplied by 4 transactions per day per truck times 240 working days, it results in an overcharge of more than \$1,977. Since the practice of using stored tare is used by other types of businesses (e.g., landfills, asphalt plants, etc.) where prices may reach \$70 or more per ton, an error of 750 pounds in the tare weight of a truck would equal \$26 per weighment. If this truck were involved in four transactions per day for 240 working days the overcharge would total more than \$25,000.

The SWMA recommends that the Committee:

1. Develop a method of sale regulation for stored vehicle tare weights. Require scale operators to maintain accurate and up to date tare weights. The SWMA submitted the following suggested requirements for a new method of sale.

**3.5 – Vehicle Tare Weights - Whenever stored vehicle tare weights are employed in the sale of commodities the following conditions and requirements shall apply:**

**3.5.1 - Allowable differences. - The difference between actual tare weight and stored tare weight must not exceed plus or minus 272 kg (600 lb).**

**3.5.2 - All stored vehicle tares shall be accurately determined to the nearest scale division.**

**3.5.3 - Stored vehicle tares shall be verified at regular intervals, not to exceed 3 months.**

2. Adopt appropriate allowable difference between actual tare weight and stored tare weight.
3. Develop an examination procedure outline, and enforcement procedures.
4. Collect data from States that have not yet responded to a survey conducted by the States of Maryland and North Carolina.

The Northeast Weights and Measures Association (NEWMA) supports development of this item. According to the NEWMA report some states already prohibit stored tares in present enforcement programs, but many fear that the practice is fairly widespread. NEWMA officials support the concepts of timely verification of stored tare weights. Stored tare weights should also be subject to increased surveillance by officials during device inspections. There was also some question that stored tare weights are inconsistent with the provisions of the Uniform Weighmaster Law because the tare weight was not actually measured by the weighmaster and would invalidate any weight ticket issued. The Western Weights and Measures Association recommends this item be further developed by considering other States' tare regulations.

**Interim Meeting Action:** The Committee received comments from the States of Maryland and Mississippi. Maryland requested that this item be maintained as developmental and suggested further work to be done by the Southern Weights and Measures Association. Mississippi testified that stored tare weights are illegal in their jurisdiction. The Committee voted to maintain this item as Developmental. The Committee believes that further work should be done on a regional level to clarify the issue and fully develop the proposal.

## **232-4                    W            Canned Clams**

**Source:** The Western Weights and Measures Association (WWMA)

**Status:** This item is under development by the Western Weights and Measures Association. For further information, contact Steve Morrison, San Luis Obispo County, California at 805-781-5910, or at [Sfmorrison@Co.Slo.Ca.Us](mailto:Sfmorrison@Co.Slo.Ca.Us) via email. The Committee accepted comments on this issue at the 2000 Interim Meeting.

**Background:** The WWMA recommends developing data to justify adoption of a method of sale that would require that canned clams be sold by drained weight.

**Interim Meeting Action:** Testimony from representatives of the Clam industry and FDA revealed that clam juice has nutritional value and is included in the nutritional information required under the Nutritional Labeling and Education Act. Based on this information the appropriate method of sale is by net weight. The Committee feels that the FDA should develop a "Standard of Identity". The Committee voted to Withdraw this item and urges FDA to develop a "Standard of Identity" for Clam products.

## **232-5                    I            Temperature Compensated Sale of Petroleum Products**

**Source:** Northeast Weights and Measures Association (NEWMA)

**Background:** NEWMA, is proposing a Specifications and Tolerances Committee item to add temperature compensation to the Vehicle Tank Meter Code and recognize it for all devices in the Liquid Measuring Device code. According to the NEWMA report parallel change needs to be made to the Method of Sale Regulation to permit compensated sales of petroleum products. NEWMA notes that Pennsylvania, New Hampshire, Maine and Canada permit compensated sales in areas like retail sales of home heating oil and retail sales of gasoline. The development of stable electronic temperature compensation permits compensated transactions to take place accurately and inexpensively. This new technology is the reason for the reemergence of this issue that the Committee first explored in the 1970s. According to the NEWMA the lack of specific guidance in Handbook 130 does not help. States are forced to use the lack of standards in Handbook 44 to try to stop compensated sales. Sometimes, as in the case of Maine, this does not hold up. Officials agree that compensated sales should include the entire fleet in addition to the traditional requirement that the system be used for a twelve-month period. The NEWMA believes it is time for the NCWM to recognize this method of sale as the most equitable way to sell products.

**Interim Meeting Action:** The Committee feels that further action depends on the outcome of the Specifications and Tolerances Committee item number 331-1, Recognition of Temperature Compensation. The Committee voted to maintain this item as Informational.

## **236                                    Uniform Regulation for National Type Evaluation**

### **236-1                    I            Ensuring the NTEP Regulation is Consistent with NTEP Policies**

**Source:** Northeast Weights and Measures Association (NEWMA)

**Background:** Recent changes have been made to Publication 14 to institute classes of certificates: active, inactive, and withdrawn, but these changes have not been added to the Uniform Regulation for NTEP. The NEWMA requested that the Committee determine if changes should be made to harmonize the provisions of Publication 14 and the NTEP regulation. Prior to adopting NTEP maintenance fees, Certificates of Conformance (CC) did not expire. Under the maintenance fee system, manufacturers can only sell new devices that have an active CC or those manufactured before the CC expired. The regulation does not prohibit a manufacturer from producing and selling devices with an inactive CC. The NEWMA believes that definitions are needed for the class of certificate, and language is needed to clarify the meaning "traceable to a CC." The NEWMA believes the current Section 3 is vague and that if a company is prohibited from selling a new device under an inactive or withdrawn certificate, States may be challenged. The Committee conducted a review of the regulation and identified several areas where it needs to be modified to reflect recent NTEP changes in Publication 14. The Committee carried this item over pending further action by the NTEP Board of Governors. The proposed changes will be presented in full after the Committee has had an opportunity to consider the impact of the change in NTEP administration.

**Interim Meeting Action:** The Committee voted to maintain this item as Informational. The Committee believes that additional guidance on NTEP policies is required prior to making a decision on this issue.

## **236-2                    V            NCWM Certificates of Conformance**

**Source:** Central Weights and Measures Association

**Background:** The proposed changes make the Uniform Regulation for National Type Evaluation consistent with the NCWM management changes that occurred at the Annual meeting of the National Conference on Weights and Measures on July 27, 1999. It will correctly identify who the issuing authority is for a Certificate by amending the definition of Certificate of Conformance.

**Recommendation:** Amend the NTEP Regulation as follows:

**Section 2.1. Certificate of Conformance.** A document issued by the ~~National Institute of Standards and Technology~~ National Conference on Weights and Measures based on testing by a Participating Laboratory, said document constituting evidence of conformance of a type with the requirements of this document and the NIST Handbooks 44, 105-1, 105-2, or 105-3.

**Section 2.4. National Type Evaluation Program.** A program of cooperation between the National Conference on Weights and Measures, National Institute of Standards and Technology, other Federal agencies, ~~National Conference on Weights and Measures~~, the States, and the private sector for determining, on a uniform basis, conformance of a type with the relevant provisions of National Institute of Standards and Technology Handbook 44, "Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices," and National Conference on Weights and Measures, Publication 14, "National Type Evaluation Program, Administrative Procedures, Technical Policy, Checklists, and Test Procedures."

**Interim Meeting Action:** The Committee voted to change the item designation to Voting. The Committee requests additional guidance from the Board of Directors on the timing of the change to coordinate with the NTEP transition.

## **237                                    Uniform Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation**

### **237-1                    I            Compliance Procedures for the Premium Diesel Fuel Regulation**

**Source:** Petroleum Subcommittee

**Background:** In response to the 1998 NCWM adoption of premium diesel regulations, the SWMA requested the Committee to develop guidelines on regulatory procedures to assist States in ensuring compliance with the rule. The Premium Diesel Work Group developed an initial draft document based on the request. The draft document was presented to the Laws and Regulations Committee at the 1999 Interim Meeting. After reviewing the document, the Committee agreed with the recommendation and requested the Premium Diesel Work Group continue to develop the document into a final version. In an effort to solicit NCWM membership comments on the desired content of the guideline material, the document is presented in Appendix A as an informational item.

**Interim Meeting Action:** The Committee was advised that ASTM Standard D6468 has been adopted. The Committee voted to maintain this item as Informational.

### **237-2                    I            Petroleum Subcommittee Agenda Items**

**Source:** Petroleum Subcommittee

**Background:** The Subcommittee has submitted several proposed projects for its 1999-2000 work plan. The Committee will develop an agenda for the Subcommittee based on the comments received on the following projects at the Annual Meeting.

**Update the Engine Fuels, Petroleum Products, and Lubricants Laboratory Guideline** – This guideline is contained in the Interpretations and Guidelines Section of NIST Handbook 130 and was last updated in 1994. Since then, the cost of equipment has changed, and new test methods have been developed. The Subcommittee proposes to revise and update the guideline.

**Federal Kerosene Dye Information** – It was suggested that information on the new Internal Revenue Service kerosene dye policies be prepared and distributed to the States. The Subcommittee proposes to develop and distribute this information.

**Automotive Lubricants** – The Uniform Engine Fuels, Petroleum Products, and Automotive Lubricants Regulation, implies that the document covers lubricants. When the regulation was developed, the Subcommittee gave developing engine fuel requirements priority, with the understanding that in the future they would address lubricants. The uniform law gives broad authority to regulate lubricants; however, the regulation had no requirements. The Subcommittee has proposed developing requirements for lubricants for the Committee to consider.

**Publication 21:** The Western Weights and Measures Association recommends that the Petroleum Subcommittee also revise the sampling procedures and container requirements in NCWM Publication 21-*Petroleum Products Sampling Procedures and Safety Manual* to provide adequate precautions regarding the use of clear glass containers for product specification conformance testing. This recommendation is based on data presented to the NCWM by Chevron Products Company and Tennessee.

**Interim Meeting Action:** The Committee recognizes Randy Jennings and his subcommittee for all their work dealing with the assigned petroleum issues. The Committee publicly commends and thanks all those involved for a job well done. Randy, who serves as chairman of the Petroleum Subcommittee, was unable to attend the Interim Meeting because of funding problems; therefore the Committee did not receive the anticipated update. A new budget has been submitted to the NCWM Board of Directors, and the Committee expects that it will be approved allowing the Petroleum Subcommittee to complete its assigned tasks. The Committee voted to maintain the subcommittees' agenda as Informational.

## 238 Interpretations and Guidelines

### 238-1 V Guideline on Product Flush Prior to Octane Sampling

**Source:** Southern Weights and Measures Association (SWMA)

**Background:** At the 1989 NCWM, Item 237-1: The NCWM adopted Octane Rating For Blend Dispensers. Passing this item was supposed to result in the following language being placed in NCWM Publication 3, *Policy, Interpretations, Guidelines*"

"A minimum of 0.3 gallons of motor fuel shall be flushed from the dispenser before taking a sample for octane verification. The flush shall be returned to the storage tank containing the lowest octane."

This statement included a footnote related to multi-product dispensers that the NCWM deleted in 1993. All technical information supporting the 1liter (0.3 gallon) flush can be found in the Report of the 74th NCWM (1989) and in the Report of the 78<sup>th</sup> NCWM (1993). NCWM Publication 3 has since been discontinued, and the guideline does not appear in the Interpretations and Guidelines Section of NIST Handbook 130. The SWMA recommends that this guideline be added to NIST Handbook 130 because it provides for uniform sampling and agrees with NCWM Publication 21, *Petroleum Products Sampling and Safety Manual*.

**Recommendation:** Add the following guideline to the Interpretations and Guidelines Section of Handbook 130.

#### 2.6.15. Minimum Fuel Flush for Octane Verification

**A minimum of 1.2 liter (0.3 gallon) of motor fuel shall be flushed from a dispenser before**  
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**taking a sample for octane verification. The flush shall be returned to the storage tank containing the lowest octane."**

**Interim Meeting Action:** The Committee believes the intent of this requirement is to use a minimum of 0.3 gallons for an adequate flush. The 0.3 gallons converts to 1.136 liter and not 1 liter as the guideline states. The Committee believes that it would be very difficult to use a 1.136 liter flush, so after consulting with several interested parties, the Committee voted to change 1 liter to 1.2 liter and move the item to voting status.

## **239 Price Verification**

### **239-1 W Limit Time Allowed for Intentional Undercharges**

**Source:** Northeast Weights and Measures Association (NEWMA)

**Background:** The City of Boston, Massachusetts reported a problem with intentional undercharges. Early drafts of Publication 19 had a twenty-four hour time limit on intentional undercharges to permit retailers time to complete price changes. This was removed prior to adoption by the Conference at the request of the retail industry. The lack of a time limit leads to non-uniformity as some jurisdictions still allow 24 hours while other neighboring jurisdictions may choose other time limits. In principle, any pricing error is an error. Errors should be corrected in a timely manner. To promote uniformity and set reasonable limits, NEWMA proposes that the language of Section 2.14 (e) be amended to limit intentional undercharges to 48 hours. This should be more than sufficient time to complete price changes.

**Interim Meeting Action:** The Committee believes that numerous and very different pricing systems exist around the country. Price changes and errors, in principle, should be corrected in a timely manner. The Committee believes that establishing a specific time limit for changes and corrections would be detrimental to the NCWM. The Committee believes that each system should be evaluated on an individual basis and that the regulatory official should use their training, experience, and personal knowledge of the system to determine if any violation has occurred. The Committee voted to withdraw this item.

## **250 NIST Handbook 133**

### **250-1 W Maximum Allowable Variations (MAVs) for Count Declarations on Seed**

**Source:** Central Weights and Measures Association

**Background:** This issue relates to the value of the Maximum Allowable Variation (MAV) permitted for count declarations on packages of agricultural seed such as corn and soybeans. According to the seed industry, farmers prefer to purchase seed by count because count is used in calculating acres per bag of seed and in calibrating seeding machines. The Committee worked with members of the seed industry, trade associations, and other interested parties to develop a proposal for NCWM to consider. The American Seed Trade Association (ASTA) established a work group comprised of industry and university representatives to study this issue and prepare recommendations for consideration at the 1998 Interim Meeting. The ASTA work focused on standardizing the procedures used to insure the accuracy of electronic seed counters and developing uniform operational procedures for their use. The work group studied other issues such as the need to determine the impact of moisture loss on the accuracy of seed count and the need for a simplified test method to determine count. Prior to the Interim Meeting, the Committee received a letter from the Association of Official Seed Analysts (AOSA) about its study on seed count accuracy. The AOSA is an organization of regulatory agencies and/or seed laboratories from the U.S. and Canada whose mission is to promote uniform laws, regulations, and laboratory test methods. AOSA's letter described their proposed test method for counting soybeans which requires that the variation between test results be limited to 2 percent. The test method also includes procedures for sample selection and equipment calibration. The American Association of Seed Control Officials (AASCO), and the States of Maryland and Michigan submitted letters supporting the AOSA proposal. At the Interim Meeting, ASTA and Iowa State University presented the results of their studies and explained the difficulties encountered in verifying seed counts. They also described how moisture loss impacts the accuracy of net weight and count declarations. The ASTA proposed that the NCWM adopt an MAV of 6 percent for seed count and requested that one or more packages be allowed to exceed the MAV.

**Discussion:** Due to the disparity between the recommended allowances determined by the two studies (Iowa State and AOSA), the Committee made this issue an information item. It recommended further review of the study methodologies and test results submitted by the interested parties. The Committee also encouraged the ASTA and AOSA to resolve the

differences in their recommendations and resubmit a mutually agreeable proposal for future consideration. Study disparities aside, the Committee believes that the appropriate method of sale of packaged seed is by net weight and, if desirable, a seed count declaration should be included as supplemental information. If the seed industry selected this method of providing count information as a supplemental declaration, it would still be useful and easily accessible to farmers. This approach reduces the need for weights and measures officials to devote resources to verify the declaration which the seed control officials could control as part of their other regulatory duties. The Committee believes this is one way to resolve this issue, because seed control officials have test equipment and can often verify count declarations as part of the seed certification process conducted in a laboratory.

At the 1998 NCWM Annual Meeting, a representative of the ASTA reported that its members had met with officials from the American Association of Seed Control Officials (AASCO) to develop a joint proposal regarding that appropriate MAV for count. At the 1999 Interim Meeting the Committee learned that both organizations agreed to support a proposal for a 4 percent MAV on declared count for soybean and corn. ASTA also urged the NCWM to adopt the AOSA sampling procedures for seed, and indicated that they want to work with the Committee to develop a gray area for different seed similar to those the NCWM adopted for dry pet food and flour.

**1999 Regional Action:** At the Central Weights and Measures Association Interim Meeting, a jurisdiction stated that for some seeds, the primary declaration should be count. Farmers use count to determine how many acres can be planted. Weight is not a consideration in the price of the seed. It was pointed out that if count is used as the primary declaration, test procedures in HB 133 should be reviewed. Under current test procedures, a package containing 80,000 seeds would require a manual count of 8,000 seeds by the inspector.

**1999 Interim Meeting Action:** The Committee carried this item over pending final action by the Association of Official Seed Analysts (AOSA) Seed Count Committee on a recommendation for test procedures and an MAV for corn and soybeans.

**Interim Meeting Action:** The Committee believes that variations on seed count make it impossible to determine and establish an appropriate MAV. The Committee believes that it will be some time before such standards can be determined and considered. The Committee voted to withdraw this item.

## **250-2            I            Developing a 4<sup>th</sup> Edition of NIST Handbook 133**

**Source:** Laws and Regulations Committee

**Background:** Currently, NIST Handbook 133, "Checking the Net Contents of Packaged Goods," is comprised of the Third Edition (1988) and Supplements 1 (1990), 2 (1991), 3 (1992), 4 (1994). Other amendments adopted by the NCWM in 1998 and 1999 have not been published in supplemental form. There is little doubt that a new edition of the handbook must be published to eliminate the confusion caused by the supplements and to reduce the burden on inspectors and others who use the handbook. Developing a new edition is important so that the amendments to the handbooks adopted in 1998 and 1999 can be published and adopted by jurisdictions that incorporate Handbook 133 by reference. Following guidance received from the NIST Handbook 133 Working Group and the Committee, the Office of Weights and Measures (OWM) prepared two drafts of the 4<sup>th</sup> Edition of NIST Handbook 133. Comments on the second draft generally support the plain language, the question and answer format, and the elimination of some of the detailed explanations, examples, and other information included in the original Third Edition of the Handbook published in 1988. While most of the comments have been supportive, several jurisdictions expressed concern over the new format and the elimination of some explanatory information. One comment said that the new format is appropriate for use as a field inspector's manual, but it is not an acceptable replacement for the current handbook. This comment suggested that OWM update the Third Edition published in 1988 retaining all of the current information, pictures, and examples. A second comment proposed a different organization of the handbook while a third suggested an extensive preface that addresses State and local adoption and use of the handbook. The proposed preface would explain Federal Pre-emption, and describe the procedures officials should follow before taking legal action on small lots of packages in retail stores. One of the most significant comments pointed out the need to use a more statistically valid method to compute the sample correction factor.

OWM has requested guidance from the NCWM on how to proceed with this project. They would like to know what the NCWM wants in terms of format and content in a 4<sup>th</sup> Edition of the handbook if the content, plain language, and question and answer format in the second Draft does not meet the needs of the users.

The Committee held a public hearing at the Interim Meeting to receive comments on the following proposals:

1. OWM staff continues to develop a third draft of 4<sup>th</sup> Edition of the handbook using the question and answer/plain language format presented in the 2<sup>nd</sup> draft of the 4<sup>th</sup> Edition. OWM will issue a third draft that incorporates the comments it received on the second draft. The third draft of this version of the handbook could be published in 2000.
2. The second proposal is to return to the original format in the 1988 version of the Third Edition of the Handbook retaining all of the detailed examples and interpretations. If this alternative is selected, the NIST Handbook 133 Working Group will take the lead on developing and preparing a draft revision. OWM will provide technical assistance to the Working Group.
3. The third proposal the Committee is considering is to reorganize and restructure the handbook to the format presented below. This reorganization would provide even more of the detailed examples and interpretations than was provided in the Third Edition of the Handbook.

*NIST HANDBOOK 133 – Outline of Proposed Reorganization & Structure*

*The handbook is to be self-contained and independent of any other handbooks or documents. There should be no references to requirements contained in other documents because not all have been adopted by every jurisdiction.*

A. *Preamble*

*Introduction from the existing Handbook 133, Third Edition*

*Synopsis of the theory of statistical sampling*

*Overview of the sampling and testing procedures used in the Handbook*

B. *Regulation*

1. *Application and Requirements of the Regulation, Definitions.*
2. *Compliance Determination. Core Procedure based on testing by weight, for Category A and B Sampling Plans, including adjustments or differences specific to Moisture Loss Allowance, and Established Gray Areas for wet tare jurisdictions.*
3. *Compliance Determination for Sampling Plans used for Packages Labeled by Count and Packages with Allowable Differences.*
4. *Tables*

C. *Information, procedures, and instructions for the Inspector.*

1. *Question and answer format for the detailed steps used in conducting tests according to this regulation.*
2. *Additional information concerning theories, inspections, and techniques of interest to sampling and testing programs.*

D. *Test Procedures*

1. *Weight procedures: General: net weight, drained weight, and substitution method, etc.*  
*Specific commodity: aerosol, frozen food, drained weight frozen food, glazed seafood & fish, canned coffee, borax, flour, meat and poultry from Federally-inspected plants, etc.*
2. *Liquid volume test procedures: General: direct measure, gravimetric, depth gage, headspace, displacement, etc.*  
*Specific commodity: milk, paint, very viscous materials, ice cream, etc.*
3. *Dry Volume: General and specific commodity tests.*

#### 4. Count

##### E. Appendix: Random Number Tables, Glossary, Acknowledgements and References, Model Inspection Report Forms.

If the third proposal is accepted, the NIST Handbook 133 Working Group would take the lead in developing a draft revision. OWM will provide technical assistance to the Working Group.

**Interim Meeting:** The Committee solicited comments on these proposals at the Interim Meeting. The Committee met with the Board of Directors to discuss these proposals, request funding for the NIST Handbook 133 Working Group, and develop timetables so this project can be concluded in a timely manner.

**Interim Meeting Action:** The Committee met with the Board of Directors and formulated the following plan: OWM will continue to develop the 4<sup>th</sup> edition using the question and answer format. Any technical changes from the current requirements will be subject to review and approval of the L&R Committee and will be forwarded to the conference as informational items. No time line has been established for completing the handbook; however, OWM will maintain this item as a high priority. The Committee has requested that a “roundtable” discussion concerning HB 133 be scheduled at The 2000 Annual Meeting of the National Conference. The Committee voted to continue this item as Informational.

#### Technical Changes and Corrections to NIST Handbook 133

The Committee received hundreds of good comments and suggestions on the second draft of the 4<sup>th</sup> Edition of NIST Handbook 133. Several comments addressed statistical issues, lot sizes, and the need for officials to follow due process procedures when they take action on packages that fail to meet the average or individual package requirements in the handbook. The Committee solicits comments on the suggested changes to the handbook that are detailed in items 1, 2, and 3 below.

1. The Sample Correction Factors in Table 2-1. Sampling Plans for Category A were originally computed using  $2/\text{square-root of } n$ . Numerous comments on the second draft pointed out that the statistically correct approach to computing the SCF should use the t-statistic that sets the correction factor to match the sample size. NIST agrees that this change should be made to make the handbook correction factors statistically correct which will also bring it into closer harmony with the *OIML 87 "Net Contents in Packages"*. If this change is adopted, the following correction factors would replace those currently in Table 2-1.

Sample Size	Sample Correction Factor
1	Apply MAV
2	8.984
3	2.484
4	1.591
5	1.241
6	1.050
7	0.925
8	0.836
9	0.769
10	0.715
11	0.672
12	0.635
24	0.422
48	0.291

2. Comments received on the second draft pointed out some concern that the 48 item sample for lots with more than 3200 packages resulted in actions being taken against lot sizes up to 200,000 packages. Field inspectors have difficulty properly collecting a random sample from very large lots, so most inspectors try to divide very large lots into more manageable sizes. Even though the inspectors determine the lot size the current version of the handbook provides no guidance on dividing lots. *OIML 87 "Net Contents in Packages"* recommends that lots of more than 10,000 packages be divided into smaller lots. NIST recommends that similar guidance be added to the 4<sup>th</sup> Edition of the handbook in the form of a note to the sampling plans so the handbook provides guidance that is consistent with OIML 87.



3. Industry provided comments on the need for officials to follow due process procedures when taking action on lots of packages. According to the comments, one of the most frequent problems industry encounters is that many jurisdictions do not follow the model guidelines on due process procedures adopted by the NCWM in 1997. OWM has suggested that Section 2.6.10. Model Guidelines for the Administrative Review Process in the Interpretations and Guidelines Section of NIST Handbook 130 be incorporated as appendices in the 4<sup>th</sup> Edition of the handbook along with Section 2.6.12. Point-of Pack Inspection Guidelines. Including these in the handbook will stress their importance, and they will be available to every official who conducts net content verifications.

4. Other notes: several comments correctly pointed out that the ratios and number of packages to be opened in the tare determination tables in the 4<sup>th</sup> edition draft are not consistent with the third Edition. OWM is in the process of re-computing all of the tare determination tables to identify and correct any errors that may have occurred in calculating or rounding the values. The third Draft of the 4<sup>th</sup> Edition of the handbook will include updated tables set to ensure that the contribution of tare to overall variation is no more than 5 - percent, the limit NCWM adopted in 1994.

## 260 Other Items

### 260-1 W Electronic Price Labels

**Source:** Southern Weights and Measures Association

**Background:** In 1998 the Committee received the following correspondence from the Hobart Corporation.

*"Hobart now offers an 'Electronic Shelf Labeling System'. As this new product enters the market, we are encountering variations in requirements from state to state. We are requesting that a Uniform Regulation for Electronic Price Labels be developed as a standard for electronic price labeling at the retail shelf. We would like to request that you raise this issue at the Southern Regional meeting of the NCWM in October so that the proposal may begin receiving due process toward completion of a regulation.*

*Electronic Shelf Tags provide a near certain way to assure accurate pricing and 1:1 correlation between the displayed price and that stored in a retail store's central computer files. As a manufacturer, we are facing the prospect of having to design and tool shelf tags unique to each jurisdiction. This will be an expensive process for us and will reflect ultimately on the price and, consequently, acceptance of this technology. We feel confident that a Model Regulation will facilitate the acceptance of electronic price labeling and will lead to a more rapid implementation to the benefit of the consumer.*

*Currently, states are attempting to apply their paper tag requirements. We are seeing variations in requirements including but not limited to: use of background colors, use of 'bold' type for 'Unit Price', special locations for unit and total price information and differing minimum character size requirements. All in addition to the stipulations of the Unit Pricing Regulation in Handbook 130."*

**Regional Meeting Action:** The Hobart Corporation and Southern and Western Weights and Measures Associations recommend that this item be withdrawn. The Northeast Weights and Measures Association (NEWMA) believes there is merit in continuing to look for some national uniformity in this area. This is an emerging technology that will be cheaper and better in the long term if the states can adopt uniform standards. Certainly it would be cheaper for industry to implement and would certainly benefit consumers. NEWMA supports the idea of a work group to explore standardization.

**Interim Meeting Action:** The Committee believes that placing restrictions on such new technology would be detrimental to the further development of such technology and voted to withdraw this item.

## Laws and Regulations Committee

S. Morrison, San Luis Obispo County, California, Chairman

R. Williams, Tennessee

D. Onwiler, Nebraska

D. Johannes, California

P. D'Errico, New Jersey

**Associate Membership Committee Representative:** C. Guay, Procter & Gamble Company

**NIST Handbook 133 Working Group:** B. Bloch, California, Chairman

**Petroleum Subcommittee:** Randy Jennings, Tennessee, Chairman

Canadian Technical Advisor: J. Watters

NIST Technical Advisor: T. Coleman

NIST Technical Advisor on the Uniform Regulation for National Type Evaluation: T. Butcher

## Committee on Laws and Regulations

## **Appendix A.**

### **Guidelines for Administrative Decisions Regarding Premium Diesel**

#### **Introduction**

Premium diesel was first defined in 1998 as a result of voting action at the NCWM annual meeting. Prior to that, no uniform definition that was approved through a standards development organization existed. Because the scope of the NCWM definition goes beyond traditional fuel testing parameters, certain administrative aspects for a regulatory agency justify discussion.

The NCWM definition encompasses five parameters from which the marketer may choose when formulating a premium package: Cetane Number, Low Temperature Operability, Energy Content, Fuel Injector Cleanliness, and Thermal Stability. Requirements for claiming cetane number, low temperature operability, and energy content are more traditional elements of diesel fuel testing and do not warrant a detailed discussion in this document. Because traditionally, fuel cleanliness and thermal stability have been less familiar parameters for diesel fuel, this document will focus primarily on those properties. Additionally, this document will offer guidance on sample volumes necessary to conduct laboratory testing.

#### **Fuel Cleanliness Guideline**

The fuel cleanliness criterion of the NCWM Premium Diesel regulation is based on performance in the Cummins L10 Injector Depositing Test. This criterion can be met by either the use of a detergent additive or by demonstrating that the fuel as sold can pass the Cummins L10 test due to inherent cleanliness. Compliance testing initiated by the weights and measures official should be conducted with the Cummins L10 Injector Depositing Test using the latest test method as approved by the ASTM Cummins L10 Injector Depositing Test Surveillance Panel. As of September 1, 1998, this is draft test procedure number 4a.

From an enforcement point of view, the marketer must be prepared to provide sufficient data to substantiate the detergency claim to a state weights and measures director.

When using a detergent additive meets the criterion, the marketer must have passing results from a Cummins L10 Injector Depositing Test. The test must be conducted using Cat 1K reference fuel. The test data must also include the treatment level (amount) of additive that was used in the performance test to achieve the passing result.

To verify the proper addition of additive into diesel fuel, the marketer is expected to maintain records that allow reconciliation between additive consumption at the required additive treatment rate shown in the test data and the volume of premium diesel fuel sold. It is recommended that this Volume Additive Reconciliation be compiled on a quarterly basis and that records be maintained for a minimum of one year. A sample additive usage form is provided as a guide at the conclusion of this document.

The marketer must also maintain a chemical and physical description of the detergent additive that is being used. This description can be compared to the chemical and physical properties of an additive sample drawn from the marketer's facility. This allows the inspector to assure that the additive being used is substantially similar to the additive used in developing the required supporting documentation. The chemical and physical description of the detergent additives should include as a minimum:

- Specific Gravity
- Viscosity @ 20 °C and 100 °C
- Elemental Analysis *or* Fourier Transformation Infrared Analysis

It is important to note that many diesel fuel additives that can be used under the NCWM regulation may contain a number of different components, including active ingredients and solvents. All documentation and additive descriptions should reflect the additive package that the inspector will encounter in the field. Additionally, it is common practice in the industry to switch additives between summer and winter to meet seasonal performance and additive handling needs. The director of the responsible jurisdiction should consider this when determining the timing of additive package testing for performance criteria or compositional analysis.

To check the actual performance of the detergent additive in use, the inspector may collect a sample of the actual additive used at the marketer's facility to produce premium diesel fuel. This sample can be tested using the latest test procedure in the Cat 1-K fuel as recommended above. This proof testing is at the discretion of the inspecting agency.

If the marketer chooses to demonstrate the inherent cleanliness of the fuel being sold (fuels that can meet the requirement without detergent additive or by using a lower than recommended concentration of additive), the fuel must be tested annually at the marketer's expense. The regulatory agency must agree with the test date. If the annual test fails to comply with the rule, the marketer pays for any additional testing. If the test fails to comply with the rule, the director has the authority to initiate enforcement as authorized by the governing law of that jurisdiction. To continue to market the fuel as premium diesel, the marketer may be requested to provide a description of production adjustments along with a newly acquired L-10 pass certificate to the Director.

All documentation associated with the detergency criterion should be made available to the director within a reasonable period of time upon request. It is recommended that the data be provided within 30 days of the request. Data sharing among the various regulatory agencies may be an especially useful tool for assurance of fuel cleanliness compliance. If a regulatory agency has reason to suspect a detergent package being used is less than adequate to meet premium diesel standards, the regulator may benefit from obtaining any available data on testing conducted on that package by other regulatory agencies. Additionally, when fuels that rely on the inherent cleanliness of the fuel to qualify as premium diesel are marketed across jurisdiction lines, it would be reasonable to request data from the director of the jurisdiction in which the point of product distribution is located prior to requiring the marketer to provide new test data.

## **Thermal Stability Guidelines**

The test method adopted by the NCWM, Octel America F21-61, is a well-established and reliable indicator of the ability of the fuel to withstand high temperature exposure for a prolonged period of time (180 minutes, 150 °C). This test is currently being developed into an ASTM test method. The procedure has been drafted into ASTM format and a round-robin test program to determine the test's repeatability and reproducibility limits has been conducted. While this method will not be official until accepted by ASTM, it is expected that the reproducibility of the test method will be approximately 10% at the 80% reflectance level based on the use of the prescribed reflectance meter.

## **Sample Volume Guidelines**

### **Detergency**

Test Method: Cummins L10 Injector Depositing Test, draft test procedure number 4a

Volume of Fuel Required/Test: 320 - 340 gallons

Volume of Additive for testing with CAT-1K reference fuel as specified by the additive producer.

### **Energy Content (Btu)**

Test Method: ASTM D240 Heat of Combustion of Liquid Hydrocarbon Fuels by Bomb Calorimeter

Volume of Fuel Required/Test: 50 ml (recommend 100 ml)

### **Low Temperature Operability**

#### **Cloud Point**

Test Method: ASTM D2500 Cloud Point of Petroleum Products

Sample Collection: Obtain samples in accordance with Practices ASTM D4057 or ASTM D4177

Volume of Fuel Required/Test: 50 ml (recommend 100 ml)

## **LTFT**

ASTM D4539 Filterability of Diesel Fuel by Low-Temperature Flow Test

Volume of Fuel Required/Test: 200 ml (recommend 500 ml)

## **Thermal Stability**

Test Method: Octel F21-61

Volume of Fuel Required/Test: 50 ml (recommend 100 ml)

## **Cetane**

Test Method: ASTM D613 Cetane Number of Diesel Fuel Oils

Volume of Fuel Required/Test: 1000 ml (recommend 2000 ml)